

De Prunner's Ringlet *Erebia triaria* (de Prunner, 1798) (Lepidoptera: Nymphalidae: Satyrinae) – a new species for the Republic of Macedonia

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Abstract. A single male of de Prunner's Ringlet *Erebia triaria* (de Prunner, 1798) was discovered in the lower part of the Jadovska River Valley, near the Selce village in NW part of Macedonia. This is the first record for Macedonia and only the fourth in the Balkan Peninsula, where it is extremely local. This moves the southeasternmost distribution border of the species for about 120 km. This discovery brings the number of butterfly species for Macedonia to 206.

Key words: *Erebia triaria*, Macedonia, diversity, butterflies, Balkans

Izvleček. De-Prunnerjev rjavček *Erebia triaria* (de Prunner, 1798) (Lepidoptera: Nymphalidae: Satyrinae) – nova vrsta v Republiki Makedoniji – Samček de-Prunnerjevega rjavčka *Erebia triaria* (de Prunner, 1798) je bil najden v spodnjem delu doline Jadovske reke pri vasi Selce v SV delu Makedonije. To je prva najdba za Makedonijo in hkrati šele četrta za Balkanski polotok, kjer je vrsta ekstremno lokalno razširjena. S to najdbo se je jugovzhodna meja razširjenosti pomaknila za 120 km, število vrst dnevnih metuljev v Makedoniji pa povzpelo na 206.

Ključne besede: *Erebia triaria*, Makedonija, pestrost, dnevni metulji, Balkan

Introduction

The butterfly fauna of Macedonia is among the richest in Europe and considerably well studied. So far, 205 species have been registered. Most of the information is given in a few classic books on Macedonia's butterflies, such as Thurner (1964), Jakšić (1988) and Schaidler & Jakšić (1989) that list 199 species. In the last two decades, several articles have added 6 new species to the list (Thomas 1993, Krpač & Mihajlova 1997, Lafranchis 2004, Verovnik & Micevski 2008, Micevski et al. 2009, Verovnik et al. 2010). During recent investigations in the NP Mavrovo near the Selce village (Mavrovo-Rostuše community, Western Macedonia) in the vicinity of Jadovska River, a male specimen of *Erebia triaria* has been observed, providing yet another new addition to the butterfly fauna of Macedonia.

De Prunner's Ringlet is a montane species distributed from the Iberian Peninsula (N Portugal, Spain, Andorra) through W and C Alps (France, Italy, S and E Switzerland, SW Austria) to the Balkans. Here, its range is extremely fragmented as it occurs very locally in Croatia, Bosnia and Herzegovina, Montenegro and N Albania (Mladinov & Lorković 1985, Tolman & Lewington 2009, Kudrna et al. 2011). According to Sijarić (1972/73), the Balkan subspecies of de Prunner's Ringlet (*Erebia triaria rebeli* Warren, 1932) is extremely localised and flies from 1400-1800 m, with a very short flight period. In the Balkans, the species is known from very few sites from the Dinarides including Mt. Dinara and Mt. Troglav in Croatia (Tvrković et al. 2012), Mt. Zelengora (Sijarić 1972/73) and Mt. Volujak (Rebel 1904) in the SE part of Bosnia and Herzegovina, and reaching its southeastern limit of distribution in the Prokletije Mts. at the border between Montenegro and Albania (Rebel & Zerny 1931).

Material and methods

The butterflies of the Mala Reka catchment area (Western Macedonia) were surveyed during 21. - 23. 5. 2013. Butterfly surveys were conducted on a prechosen transect covering 2 habitat types of which one part, where De Prunner's Ringlet male was caught, is a bushy, grassy and rocky habitat (Fig. 1). Monitoring was done in accordance with the standardized transect butterfly count (Pollard & Yates 1993). Collecting of adult specimens was limited to some problematic species and in cases when evidence material was necessary. Determination was done according to Tolman & Lewington (2009). The voucher has been deposited in the collection of the Macedonian Entomological Society (ENTOMAK).

Results and discussion

The de Prunner's Ringlet was observed on 21.5.2013 during our regular transect walk near the Selce village (41° 34' 30.86" N, 20° 42' 51.88" E, 1160 m) on Mt. Bistra.

Additional 27 butterfly species were observed at that site: *Pyrgus malvae* (Linnaeus, 1758), *Cyaniris semiargus* (Rottemburg, 1775), *Coenonympha pamphilus* (Linnaeus, 1758), *Erynnis tages* (Linnaeus, 1758), *Iphiclides podalirius* (Linnaeus, 1758), *Colias alfacariensis* (Ribbe, 1905), *Scolitantides orion* (Pallas, 1771), *Aricia agestis* (Denis & Schiffermuller, 1775), *Callophrys rubi* (Linnaeus, 1758), *Pieris mannii* (Mayer, 1851), *Polyommatus bellargus* (Rottemburg, 1775), *Erebia medusa* (Denis & Schiffermuller, 1775), *Glauropsyche alexis* (Poda, 1761), *Melitaea phoebe* (Denis & Schiffermuller, 1775), *Polyommatus icarus* (Rottemburg, 1775), *Leptidea sinapis* (Linnaeus, 1758), *Melitaea cinxia* (Linnaeus, 1758), *Gonepteryx rhamni* (Linnaeus, 1758), *Hamearis lucina* (Linnaeus, 1758), *Colias crocea* (Fourcroy, 1785), *Anthocharis cardamines* (Linnaeus, 1758), *Celastrina argiolus* (Linnaeus, 1758), *Coenonympha leander* (Esper, 1784), *Euphydryas aurinia* (Rottemburg 1775), *Leptidea duponcheli* (Staudinger, 1871), *Melitaea athalia* (Rottemburg, 1775) and *Pieris napi* (Linnaeus, 1758).



Figure 1. Habitat of De Prunner's Ringlet *Erebia triaria* on the southwestern slopes of Mt. Bistra (photo: N. Micevski).
Slika 1. Habitat de Prunnerjevega rjavčka *Erebia triaria* na jugozahodnih pobočjih gore Bistre (foto: N. Micevski).

De Prunner's Ringlet has not been reported from the southern part of the Balkan Peninsula for a long period of time, although it has been recently observed in Bosnia (Verovnik, pers. comm.). There are no recent records from Mt. Prokletije (Franeta, pers. comm.), while it has been reported as common on Mt. Dinara and Mt. Troglav in Croatia (Tvrtković et al. 2012). The specimen caught in Macedonia morphologically belongs to *Erebia triaria rebeli* Warren, 1932 (Fig. 2) - the Balkan subspecies of de Prunner's Ringlet (described in details by Sijarić 1972/1973). Key characteristics of ssp. *rebeli* include:

1. Length of forewing: 21 - 23.5 mm (in MK: 23 mm);
2. Forewing upper side: ocelli in s6, s5 and s4 enclosed with one joint red band; ocelli in s3 and s2 enclosed separately, each with its own rounded red band.



Figure 2. The upperside (I) and underside (II) of the male *Erebia triaria rebeli* from Mt. Bistra in Macedonia (photo: N. Micevski).

Slika 2. Zgornja (I) in spodnja (II) stran samca *Erebia triaria rebeli* z gore Bistre (foto: N. Micevski).

The habitat of the Balkan subspecies of de Prunner's Ringlet (*Erebia triaria rebeli*) on Mt. Bistra corresponds with Sijarić's description of Mt. Zelengora habitats. Specifically, these are rocky limestone habitats positioned on steep slopes (approximately 50° inclination) with southeastern exposition (Sijarić 1972/73); however, the habitat on Mt. Bistra differs in that it is not positioned above the tree line, and the juniper scrublands (*J. sabina* and *J. oxycedrus*) give it its distinct appearance. The flight period of de Prunner's Ringlet depends on the altitude. In the low altitude habitats, the flight period begins in the second half of May, while in the higher altitude habitats it begins in June and lasts until August (Seitz 1909). According to Sijarić (1972/73), the Balkan ssp. *rebeli* observed on Mt. Zelengora has a very limited flight period and appears very early, from late May until mid-July. Having in mind that the habitat of the caught specimen in Macedonia was at an altitude of 1,160 m, its appearance on May 21 was in accordance with our expectations. A single very fresh specimen observed indicates that this was the beginning of the flight period for the species at the newly discovered site. However, during our next visit in 18. - 20. 6. 2013, no additional adults were observed. This might be due to the extremely short flight period or, more likely, due to the marginal distribution of this species on the transect site. Having that in mind, additional surveys of the wider surroundings of the discovered site are required in order to locate the right habitat of the species.

Compared with other records from the Balkans, the altitude of 1,160 m, where the species was caught in Macedonia, is the lowest recorded. Sijarić (1972/73) reports on other Balkan records of the species only from altitudes between 1,400 and 1,800 m. Nevertheless, in the Alps and the Iberian Peninsula the species is present at much lower altitudes in the range between 400 and 2,500 m (Tolman & Lewington 2009). The new record of de Prunner's Ringlet is approximately 120 km to the south of the previous records from the Balkans and more than 870 km from its main range in the Alps (Fig. 3).

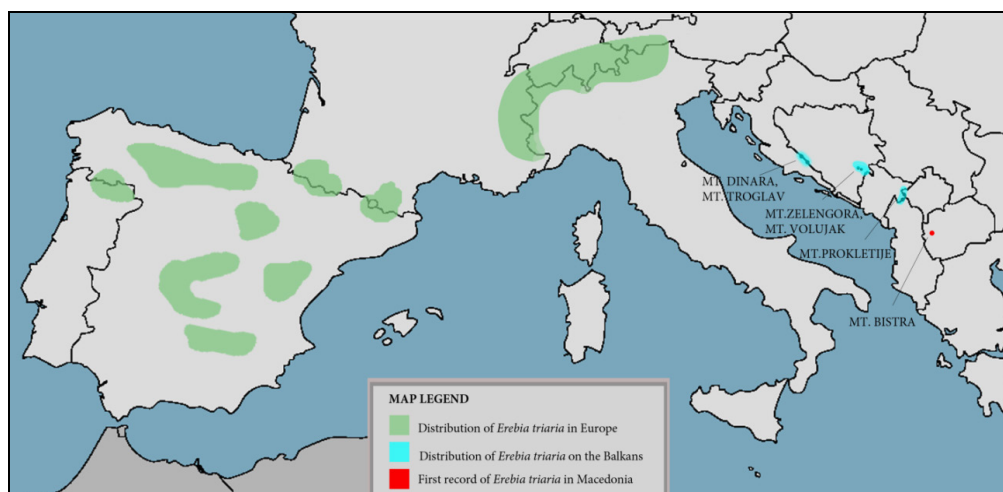


Figure 3. Distribution of de Prunner's Ringlet *Erebia triaria* in Europe (according to Tolman & Lewington 2009, Kudrna et al. 2011) and in the Balkans (Rebel 1904, Rebel & Zerny 1931, Sijarić 1972/73, Mladinov & Lorković 1985, Tvrtković et al. 2012), including the new record from Macedonia.

Slika 3. Razširjenost de Prunnerjevega rjavčka *Erebia triaria* v Evropi (povzeto po Tolman & Lewington 2009, Kudrna et al. 2011) in na Balkanu (Rebel 1904, Rebel & Zerny 1931, Sijarić 1972/73, Mladinov & Lorković 1985, Tvrtković et al. 2012), vključno z novo najdbo iz Makedonije.

As a montane species, de Prunner's Ringlet has a disjunct distribution in the Balkans with populations separated by gaps of more than 100 km. The record from Macedonia's Mt. Bistra is unique in the sense that it is the very first in the region outside the Dinarides, from where all previous populations of *Erebia triaria* have been reported.

A better picture of the species distribution in the country and the region will be provided by future investigations. Having in mind the proximity of the Šar Planina Mts. and Mt. Korab, which are positioned closer to the Dinarides (Mt. Prokletije), the presence of the species there is quite possible. Once again we have shown that the butterfly fauna of Macedonia has much more to offer and is still far from well explored. Taking into consideration its mainly mountainous relief and the multitude of hardly accessible terrains, it might hide additional surprises.

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